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(54) ADN CODANT LE RECEPTEUR SNORF25
(54) DNA ENCODING SNORF25 RECEPTOR

(57)

This invention provides isolated nucleic acids encoding mammalian SNORF25 receptors, purified mammalian SNORF25 receptors, vectors comprising nucleic acid encoding mammalian SNORF25 receptors, cells comprising such vectors, antibodies directed to mammalian SNORF25 receptors, nucleic acid probes useful for detecting nucleic acid encoding mammalian SNORF25 receptors, antisense oligonucleotides complementary to unique sequences of nucleic acid encoding mammalian SNORF25 receptors, transgenic, nonhuman animals which express DNA encoding normal or mutant mammalian SNORF25 receptors, methods of isolating mammalian SNORF25 receptors, methods of treating an abnormality that is linked to the activity of the mammalian SNORF25 receptors, as well as methods of determining binding of compounds to mammalian SNORF25 receptors, methods of identifying agonists and antagonists of SNORF25 receptors, and agonists and antagonists so identified.

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(54) Titre : ADN CODANT LE RECEPTEUR SNORF25
(54) Title: DNA ENCODING SNORF25 RECEPTOR

(57) Abrégé/Abstract:
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(54) Title: DNA ENCODING SNORF25 RECEPTOR

(57) Abstract: This invention provides isolated nucleic acids encoding mammalian SNORF25 receptors, purified mammalian SNORF25 receptors, vectors comprising nucleic acid encoding mammalian SNORF25 receptors, cells comprising such vectors, antibodies directed to mammalian SNORF25 receptors, nucleic acid probes useful for detecting nucleic acid encoding mammalian SNORF25 receptors, antisense oligonucleotides complementary to unique sequences of nucleic acid encoding mammalian SNORF25 receptors, transgenic, nonhuman animals which express DNA encoding normal or mutant mammalian SNORF25 receptors, methods of isolating mammalian SNORF25 receptors, methods of treating an abnormality that is linked to the activity of the mammalian SNORF25 receptors, as well as methods of determining binding of compounds to mammalian SNORF25 receptors, methods of identifying agonists and antagonists of SNORF25 receptors, and agonists and antagonists so identified.

All-*trans*-retinal is critical for the synthesis of rhodopsin in retinal cells, where it plays a key role in the visual system. All-*trans*-retinal can also be converted to all-*trans*-retinoic acid (ATRA) by aldehyde dehydrogenase and oxidase in other cell types (Bowman,W.C. and Rand, M.J., 1980).

Historically, ATRA and the other active metabolites of vitamin A, 9-*cis*-retinoic acid (9CRA), were thought to only mediate their cellular effects through the action of nuclear retinoic acid receptors (RARα, β, γ) and retinoid X receptors (RXRα, β, γ) (Mangelsdorf, D.J., et al,1994). These receptors are members of a superfamily of ligand-dependent transcription factors, which include the vitamin D receptor (VDR), thyroid hormone receptor (TR), and peroxisome proliferator activator receptors (PPAR). They form heterodimers and homodimers that bind to DNA response elements in the absence of ligand. In response to ligand binding the dimer changes conformation which leads to transactivation and regulation of transcription of a set(s) of cell type-specific genes (Mangelsdorf, D.J., et al,1994; Hofman, C. and Eichele, G., 1994; and Gudas, L.J. et al, 1994).

Since retinoic acid produces a wide variety of biological effects, it is not surprising that it is proposed to play an important role in various physiological and pathophysiological processes. Retinoids control critical physiological events including cell growth, differentiation, reproduction, metabolism, and hematopoiesis in a wide variety of tissues. At a cellular level, retinoids are capable of inhibiting cell proliferation, inducing differentiation, and inducing apoptosis (Breitman, T. et al, 1980; Sporn, M. and Roberts, A., 1984, and Martin, S., et al, 1990). These diverse effects of retinoid treatment prompted a series of investigations evaluating retinoids for cancer chemotherapy as well as cancer chemoprevention. Clinically, retinoids are